THE LARVÆ OF XANTHOPASTIS TIMAIS CRAMER

(*Lepidoptera, Noctuidæ*)

By HARRISON G. DYAR

This widely spread and very constant species (as adult) has a number of different larvæ. So different are they that after describing one from Florida (Journ. N. Y. Ent. Soc., x, 125, 1902), I received others from Cuba, I could not believe they belonged to the same species, and published a correction (Journ. N. Y. Ent. Soc., xi, 104, 1903), repudiating the first identification. However, the larvæ were bred, and there is now no doubt of their identity. There was none then, either, in fact, but I could not believe it. How many forms this larva has I have no idea. Guenée's figure (colored),[1] from a drawing by Abbot, is utterly unlike any of the forms known to me. It has a black head, body whitish, with three straight black bands on each segment. If this was taken from the form occurring in Georgia, and that is like the Florida one, as it certainly ought to be, then the figure is a gross misrepresentation. Yet there are certain facts about this drawing that forbid us to discard it at once. Possibly the original figure by Abbot was uncolored, and Guenée's artist, in preparing the colored plate, failed to add the orange head and tail. The absence of the conspicuous tubercles in the drawing agrees with the Florida form. Curiously enough, the pattern of markings represents a sort of synthetic type. The Florida form has a dorsal and subventral spot on the anterior end of each segment, a band on posterior border; the Cuban form has four rows of spots, the posterior row of larger spots. Combining there we get, synthetically, a row of bands, much as in Guenée's figure. Admitting the possibility that such a larva may exist, I am rather inclined to the opinion that the artist has overdone the drawing in the matter of bands.

The Cuban form was described by Gundlach (Ent. Cubana, i, 304, 1886) and by me (Journ. N. Y. Ent. Soc., xi, 104, 1903). The same form occurs in Jamaica and was briefly noted by Mrs. Swainson (Journ. N. Y. Ent. Soc., ix, 81, 1901). I have a fine blown larva from Kingston from the Schaus collection. A condensed description of the Antillean larva is given by Hampson (Cat. Lep. Phal. Brit. Mus., v, 460, 1905). It differs conspicuously by the large black tubercles and the numerous small yellow spots, no bands. The differences are what are usually called

[1] Copied without color by Chenu, Encycl. d'Hist. Nat., ii, 111, 1857.

structural, and would be thought to clearly indicate another species, if not another genus.

I have lately had the opporunity to observe the Mexican form in larvæ from Misantla, State of Vera Cruz, bred by Mr. W. Gugelmann. They resemble the Florida form quite closely, being rather more generalized. They are smooth, without prominent tubercles, head, cervical shield and anal segment as in the Florida form, but the segments with a row of spots on anterior border, the lower two spots on each side partly joined, but not joined subventrally to the broad band on posterior border. At the extremities the bands are broken into spots, on joints 2 to 5 and 11 to 13. This is only slightly indicated in the Florida form, where the anterior bands show an irregular outline. The difference is, then, an advance in the Florida form over the Mexican one in the loss of the subdorsal spot out of the anterior row and in the strengthening of the posterior band, widened and straightened and fused subventrally with the lower spot of the anterior row of the following segment. Thus the Mexican form agrees essentially with the Florida one, differing in characters which may, somewhat violently perhaps, be considered varietal and not specific. What becomes of the pattern in the rest of the vast range of the species cannot be conjectured. There is no local variation indicated in the material before me. The four Florida larvæ are alike, as are the two Mexican ones. The species ranges from Maine to Argentina, and if the larvæ have changed as much from Mexico to Florida as the specimens show, it is probable that other changes occur in the much greater distance covered by the range to the end of the continent of South America. However, I think that we are entitled to assume that there is not a radical difference, because the territory is continuous.

To return to the Antillean form, the conditions are different. It is to be supposed that the large tubercles are a primitive character. The spots were probably formed by the breaking up of longitudinal lines, which later form the transverse bands by lateral fusion. The Antillean larva, then, is in a generalized condition in both respects. It still has the large tubercles; its longitudinal lines are well broken into spots, which have become rounded, while the first step in forming the posterior band has been taken in the enlargement of those spots. But it has gone no farther, and there is a vast interval between it and the continental larva.

The conclusion seems irresistible that there are two species represented. I have examined series of adults carefully, but can see no difference in

markings. The male genitalia offer nothing tangible, being of a simple type, not strongly chitinized or differentiated. Nevertheless, on larval characters at least, the Antillean form should have a separate name. Of the names proposed, *timais* Cramer was described from the "côte du Coromandel;" *amaryllidis* Sepp, from Dutch Guiana, and *regnatrix* Grote from Pennsylvania. As there is thus no name for the Antillean form I propose **antillium,** n. sp.

This is a case of unusual distribution. Very many of the species found in southern Florida are of Antillean origin, but in this case it is clear that our *timais* is a continental species.

A NOTE ON THE MACROTHECINÆ

(*Lepidoptera, Pyralidæ*)

By HARRISON G. DYAR

Doctors Barnes and McDunnough have recently (Cont. Nat. Hist. Lep. N. A., No. 5, p. 37, 1912) given an admirable treatment of the small group of genera allied to *Amestria* Ragonot. They show that *Amestria* falls before *Alpheias* Ragonot and my *Cacotherapia* before *Macrotheca* Ragonot. They add two new genera to the group. They give the following table to separate the genera, which I reproduce with the nomenclature of the veins changed.

Fore wing with 12 veins.
  Fore wing with vein 10 arising beyond 7 . . . *Alpheias* Ragonot
  Fore wing with vein 10 arising before 7 . . . *Macrotheca* Ragonot
Fore wing with 11 veins (8 and 9 coincident).
  Fore wing with vein 10 stalked . . . . *Alpheioides* B. & McD.
  Fore wing with vein 10 from the cell . . . *Decaturia* B. & McD.

I had been aware for some time that my genus *Cacotherapia* belonged with *Amestria*, but had not worked out the matter as fully as has been done now. Unfortunately, the authors have quite misidentified my species *ponda*. It is a rather large, brownish moth with black irrorations and not the little gray and white one that they have figured. The true *ponda* falls in *Macrotheca* and not in *Alpheias*. The species which they misidentified as *ponda* may be characterized as

Alpheias vicarilis, new species.

Fore wing with the ground color nearly white, blotched with yellow-brown shades; basal space filled with brownish and dusted with black;